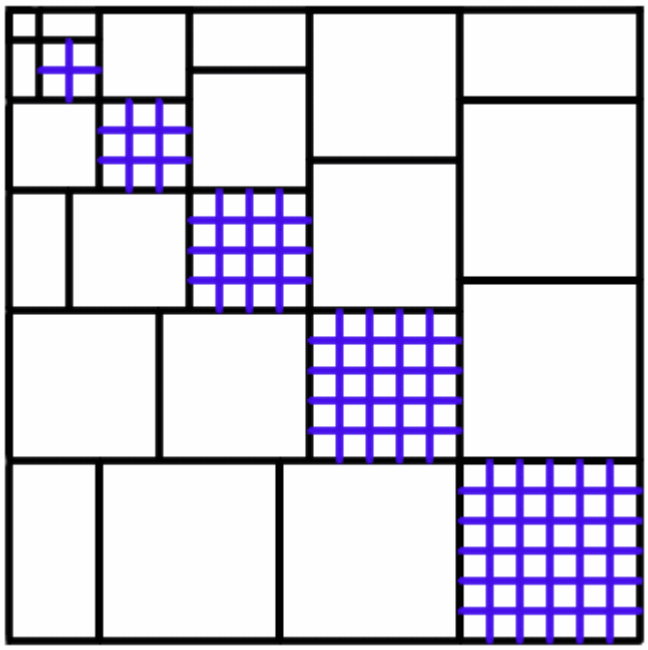
Picture Story

The picture illustrates the formula for the sum of the first six cube numbers:

$$1^3+2^3+3^3+...+6^3 = (1+2+3+...+6)^2$$



Can you see which parts of the picture represent each part of the formula?

Could you draw a similar picture to represent the sum of the first seven cube numbers?

What about other sums of cubes?

Suggest a formula for the sum of the first *n* cube numbers.

Can you prove that your formula works, using diagrams and explanations?